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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/617,925

07/11/2003

Stephan Schauz

442-191

4238

23869 7590 02/08/2007
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EXAMINER

TALBOT, BRIAN K

ART UNIT

PAPER NUMBER

1762

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

02/08/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/617,925

Applicant(s)

SCHAUZ, STEPHAN

Examiner

Brian K. Talbot

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 5-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/4/07</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. The amendment filed 1/4/07 have been considered and entered. Claims 1-4 have been canceled. Claims 5-7 remain in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. In light of the amendment filed 1/4/07, the objection to the specification concerning the Title has been withdrawn.

Claim Rejections - 35 USC § 112

4. Claims 6-7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 6, the phrase "-like" renders the claim(s) indefinite because the claim(s) include(s) elements not actually disclosed (those encompassed by "-like"), thereby rendering the scope of the claim(s) unascertainable. See MPEP § 2173.05(d).

With respect to claim 7, the terms "PA66-GF, PC/ABS, LCP, PA6/6TMID, PBTMID and PPMID" are vague and indefinite.

Claim Rejections - 35 USC § 103

5. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 01/97583, GB 2193847 or GB 2266410 in combination with Huske et al., "Laser Supported Activation and Additive Metallization of Thermoplastics for 3D-MIDS".

WO 01/97583 teaches a molded electronic assembly comprises a first molded plastic portion including a component mounting plane and a plurality of non-coplanar surfaces, a second molded plastic portion molded around the first molded plastic portion and including openings therein defining selected regions of the first molded plastic portion, metallization applied to the selected regions of the first molded plastic portion defining a network of electrically conductive traces and conductive regions providing electrical continuity over at least two of the non-coplanar surfaces. One of the first and second molded plastic portions is formed from a platable plastic material. Preferably, the first molded plastic portion is formed from a glass-filled high temperature thermoplastic loaded with conductive filler material. The second molded plastic portion is preferably formed from a glass-filled high temperature thermoplastic.

GB 2193847 teaches a molded one-piece article formed by molding into a first mold cavity a first portion of the article using an insulating material capable of being adhesion promoted by an adhesion promoting process and is catalytic for adherent metallization, inserting the first molded portion into a second molded cavity and molding and molding into a second cavity a second portion of the article using an insulating material leaving surfaces of the first molded body exposed. The second insulating material is resistant to adhesion promotion.

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Electroless metal plating is then performed on the exposed first body (abstract). The adhesion promoting process is contacting the molded body with an oxidizer or solvent (lines 85-90).

GB 2266410 teaches fitting together a first and second injection molded member, member (1) being capable of being plated. The first injection molded member has conductor patterns formed thereon. The second injection molded member has substantially the same shape and profile as the first molded member except complimentary portion. The integral member is completed by forming conductor patterns on the complimentary portions by a plating process. (abstract).

WO 01/97583, GB 2193847 or GB 2266410 fail to teach laser beam activation prior to metallization of the substrate.

Huske et al., "Laser Supported Activation and Additive Metallization of Thermoplastics for 3D-MIDS" teaches a thermoplastic part having been injection molded the surface of the thermoplastic part is then partially activated by laser irradiation prior to an electroplating process to form the circuit tracks selectively deposited on these activated areas.

Therefore it would have been obvious for one skilled in the art at the time the invention was made to have modified WO 01/97583, GB 2193847 or GB 2266410 process by incorporating a laser activation pretreatment prior to metallization as evidenced by Huske et al., "Laser Supported Activation and Additive Metallization of Thermoplastics for 3D-MIDS" because of the advantages associated therewith, i.e. increase adhesion between the metallized layer and the substrate due to the laser activation.

Response to Arguments

6. Applicant's arguments filed 1/4/07 have been fully considered but they are not persuasive.

Applicant argued that the terms "PA66-GF, PC/ABS, LCP, PA6/6TMID, PBTMID and PPMID" are not vague and indefinite as they refer to commercially available materials with their ordinary description.

The Examiner agrees in part. As long as the specification described or details the claimed materials with a specific description which is not altered/changed, then the Examiner will reconsider this rejection. However, this has not been established to date.

Applicant argued that the prior art fails to teach using two plastic material, one being platable and one being platable only with prior laser activation, to form a substrate body.

The Examiner agrees in part. However, Applicant is reminded that the references must be taken collectively. The test of obviousness is not express suggestion of the claimed invention in any or all references but rather what the references taken collectively would suggest to those of ordinary skill in the art presumed to be familiar with them. *In re Rosselet*, 347 F.2d 847, 146 USPQ 183 (CCPA 1965); *In re Hedges*, 783 F.2d 1038. In this case, the collective teachings of the prior art teach one skilled in the art that the use of platable and platable material with laser pretreatment are known in the art and one skilled in the art would have had a reasonable expectation of achieving similar success regardless of which material or both are utilized.

Hence, it is the Examiner's position that one skilled in the art would have had a reasonable expectation of achieving similar success. If Applicant disagrees, Applicant is invited to supply a showing of unexpected results garnered from using both plastic versus one or the other. Upon such a showing the Examiner will reconsider his position.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K. Talbot whose telephone number is (571) 272-1428. The examiner can normally be reached on Monday-Friday 6AM-3PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy H. Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

 2/2/07
Brian K Talbot
Primary Examiner
Art Unit 1762

BKT